

## 22J034 - Internship proposal

**Title: Development of mobility simulations – methodological architecture and implementation for sustainable assessment of logistics**

The European Institute for Energy Research was founded by EDF and the KIT in 2002 aiming at enhancing collaboration through joint projects applied to industrial issues. With its applied research orientation EIFER is bridging the gap between science and industry since more than 15 years. In the context of the European energy transition, EIFER provides research-based innovative energy solutions for the sustainable growth of cities, local communities and industries. “Climate Neutral Community” group is currently looking for a student who would be interested in working on the development of a method to assess freight mobility, for multiscale use.

### Internship description

Responsible for about a third of GES emissions for France, mobility is a key sector to decarbonate. EIFER relies on two models for simulating individual mobility. First, a territorial method is applied to conclude on local policies impacts and technology evolution, and assist local authorities in their decarbonation planning. Second, an activity-based traffic framework has been developed to estimate vehicles’ volumes at street level for concluding on local spillovers assessment. However, 50% of mobility is made of freight aspect, contributing to economics dynamic as well as its negative effects. Including this aspect into modelling is currently required to understand global impact of spreading low carbon technologies into fleet as well as local policies impacts, on environmental assessments. Therefore, the two existing EIFER tools should be enhanced with logistics assessment in a complementary approach, to allow an articulation between both scales. The internship consists on developing a territorial tool at inter-municipality/city level. The student may also be involved in research for related mobility topics.

### The assigned tasks involve

- Literature review and scientific watch upon tools and methods for logistics simulation
- Data availability and use case identification
- Development of architecture/model for logistics description at city level
- Forecast integration

### Required qualifications/skills

- Student in scientific/research field: Urban planning, engineering school
- Knowledge of Microsoft Office suite and Data management abilities
- KNIME, GIS knowledge or Java skills would be appreciated
- Good skills in French and English

### What you can expect

- An international experience in a stimulating multi-disciplinary, multi-cultural environment
- An institute at the intersection between academic research and one of the largest energy utilities
- A contribution to the key challenge of our era: the fight against climate change through the decarbonization of the energy sector

### Conditions

- Duration: 6 months
- Starting date: 2023
- Location: EIFER, Emmy-Noether-Str. 11, 76131 Karlsruhe, Germany.
- Working hours: 39.5 hours per week
- Monthly compensation: 520 € gross (compulsory internship)

### Contact

If you want to join our motivated team, please forward your electronic application with one single PDF of max. 5MB to [jobs@eifer.org](mailto:jobs@eifer.org) (cover letter + curriculum vitae). Please refer to offer number 22J034.

For additional information concerning the work, please contact Elise Nimal ([nimal@eifer.org](mailto:nimal@eifer.org)), Tel.: +49 721 6105 1709.